Amendment to the Specification:

Please replace paragraph **[0003]** with the following amended paragraph:

[0003] In this method, a Ga metallic material is charged into a reactor in which a sapphire substrate having a GaN film on its surface is held, and a hydrochloric gas is also introduced into the reactor to generate a gallium chloride gas. Then, the gallium chloride gas and an ammonia gas are reacted with each other to deposit the GaN film on the sapphire substrate. This forming process is generally called as a "Hydride Vapor Phase Epitaxy (HVPE) method".

Please replace paragraph **[0005]** with the following amended paragraph:

[0005] In the case of fabricating an AlN film using the above HVPE method, an aluminum metallic material and a chloride based gas are charged into a reactor to generate an aluminum chloride gas in the reactor. Then, the aluminum chloride gas and an ammonia gas are reacted with each other in the reactor to deposit the AlN film on a given substrate.

Please replace paragraph **[0006]** with the following amended paragraph:

[0006] It is confirmed, however, that the AlN film with good and stable properties cannot be fabricated using the above conventional HVPE method. Therefore, the inventors of the present invention have intensely studied the causes of the deterioration in the AlN film fabricated by the conventional HVPE method, and ~~found out~~ discovered the following.

Please replace paragraph **[0008]** with the following amended paragraph:

[0008] Moreover, if the pinholes are formed in the reactor through the corrosion of the AlCl gas, various gases are leaked from the reactor to the outside to bring

pollution to the outer environment, in addition to the problem that the surrounding air is introduced into the reactor.

Please replace paragraph **[0009]** with the following amended paragraph:

[0009] In order to iron out the corrosion of the reactor by the AlCl gas, it is suggested that the reactor is made of a BN material or a SiNx material having large anti-corrosion property against the AlCl gas. However, such an anti-corrosion material ~~show~~ shows only poor processing performance, and thus, can not be employed practically. Moreover, the anti-corrosion material is expensive, resulting in the higher cost of the AlN film.

Please replace paragraph **[0012]** with the following amended paragraph:

[0012] In order to achieve the above object, this invention relates to an apparatus for fabricating a III-V nitride film that includes at least Al element (a first fabricating apparatus) comprising a reactor of which at least the part to be contacted with aluminum chloride gas is made of an aluminum nitride material, wherein as viewed from a gas flow direction, at least an aluminum metallic material is charged into the upstream side of the reactor and a substrate is set into the downstream side of the reactor, and then, a III-V nitride film including at least Al element is epitaxially grown by using a Hydride Vapor Phase Epitaxy method through the reaction between the aluminum chloride gas generated by the reaction of the aluminum metallic material with the chloride-based gas and the ammonia gas which are introduced from the outside with a carrier gas.

Please replace paragraph **[0014]** with the following amended paragraph:

[0014] Moreover, this invention relates to an apparatus for fabricating a III-V nitride film including at least Al element on a given substrate by using a Hydride Vapor Phase Epitaxy method (a second fabricating apparatus), comprising a double structure reactor constructed of an inner reactor to hold a substrate and at least an

aluminum metallic material therein and an outer reactor surrounding the inner reactor which are made of a silicon oxide-based material, a gas-supplying means to introduce a chloride-based gas, an ammonia gas and a carrier gas into the inner reactor, a heater to heat the interior of the inner reactor, and a gas leak-detecting means with a gas concentration sensor to detect the gas leak in between the inner reactor and the outer reactor.

Please replace paragraph **[0023]** with the following amended paragraph:

[0023] Also, this invention relates to a fabricating method using the second fabricating apparatus, concretely to ~~A~~ a method for fabricating a III-V nitride film, comprising the steps of:

preparing a double structure reactor constructed of an inner reactor and an outer reactor, capable of detecting a gas leak in between the inner reactor and the outer reactor,

charging at least an aluminum metallic material in the upstream side of the inner reactor and setting a given substrate in the down stream, as viewed from a gas flow direction,

introducing a chloride-based gas with a carrier gas into the inner reactor from the outside, to generate an aluminum chloride gas through the reaction of the aluminum metallic material with the chloride-based gas, and

introducing an ammonia gas with a carrier gas into the inner reactor from the outside, to epitaxially grow a III-V nitride film including at least Al element on the substrate by using a Hydride Vapor Phase Epitaxy method through the reaction of the aluminum chloride gas with the ammonia gas.

Please replace the heading before paragraph **[0028]** with the following heading:

Detailed Description of the ~~Preferred Embodiments~~Invention

Please replace paragraph **[0028]** with the following amended paragraph:

[0028] Fig. 1 is a structural view showing a first embodiment of the first fabricating apparatus of the present invention. In this embodiment, the whole of the reactor 11 is made of an aluminum nitride material not to be corroded by an AlCl gas. Herein, the wall thickness of the reactor 11 is exaggerated. The aluminum nitride material has a hexagonal or a cubic crystal structure, and may incorporate other ~~element~~ elements up to 10% or so as impurities or additives.

Please replace paragraph **[0032]** with the following amended paragraph:

[0032] The GaN underfilm may be fabricated by a MOVPE method. In this case, an ELO technique may be employed. Concretely, a buffer layer grown at a low temperature is formed on the sapphire substrate, and strip SiO_2 ~~mask~~ masks are formed on the buffer layer. Then, the GaN underfilm can be fabricated through ELO growth via the SiO_2 ~~mask~~ masks.

Please replace paragraph **[0033]** with the following amended paragraph:

[0033] Moreover, in this embodiment, although the boats 15 and 17 to hold the aluminum metallic material and the gallium metallic material are arranged in the same temperature zone, they may be in ~~the~~ respective different temperature zones.

Please replace paragraph **[0037]** with the following amended paragraph:

[0037] Moreover, an evacuation system 22 is communicated with the reactor 11. A first heater 23 is provided in the upstream of the periphery of the reactor 11 as viewed from the gas flow direction, and a second heater ~~23~~ 24 is provided in the downstream. The first and second ~~heater~~ heaters 23 and 24, respectively, can be independently operated, so that the upstream zone temperature and the downstream zone temperature can be independently controlled.

Please replace paragraph **[0038]** with the following amended paragraph:

[0038] For example, the upstream zone 25 is heated up to 900°C, and the downstream zone 26 is heated up to 1000°C. Accordingly, the~~The~~ upstream zone temperature can be controlled finely. For example, the first and the second boats 15 and 17 are positioned in separation in a gas flow direction, and are heated at different temperatures.

Please replace paragraph **[0040]** with the following amended paragraph:

[0040] Fig. 2 is a structural view showing a second embodiment of the first fabricating apparatus of the present invention. In this embodiment, the same reference numerals are given to the similar parts to the one in the first embodiment as shown in Fig. 1, and ~~detail~~ a detailed explanation of those reference numerals will be omitted. In the former embodiment, the whole of the reactor 11 is made of an aluminum nitride material not corroded with the AlCl gas. On the other hand, in this embodiment, the reactor 11 is constructed of a reactor body 11a made of a quartz material as one of silicon oxide-based material and an aluminum nitride film 11b, not corroded with the AlCl gas, coated on the inner surface of the reactor body 11a.

Please replace paragraph **[0042]** with the following amended paragraph:

[0042] Fig. 3 is a structural view showing a third embodiment of the first fabricating apparatus of the present invention. In this embodiment, the same reference numerals are given to the similar parts to the one in the first embodiment as shown in Fig. 1, and ~~detail~~ a detailed explanation of these reference numerals will be omitted. In this embodiment, the part of the reactor 11 which may be corroded by the AlCl gas is made of an aluminum nitride material, and the rest not corroded is made of a silicon oxide-based material, e.g., a quartz material.

Please replace paragraph **[0050]** with the following amended paragraph:

[0050] An additional, third conduit 41 to ~~introduced~~ introduce into the reactor $NH_3+H_2+N_2$ gas is installed in the inner reactor 31. The NH_3 gas is reacted with the AlCl gas and the GaCl gas to generate and epitaxilly deposit AlN elements and GaN elements on the sapphire substrate 33, so that the AlGaN film can be epitaxially grown. On the other hand, N_2 gas is introduced through a conduit 42 communicated with the outer reactor 32. The conduits 39-42 are connected with the respective gas sources provided in gas-supplying equipment 43.

Please replace paragraph **[0051]** with the following amended paragraph:

[0051] In this embodiment, if a A-faced or C-faced sapphire substrate is employed, the C axis of the AlGaN film is oriented in a perpendicular direction to the main surface of the sapphire substrate. Such an AlGaN film can be employed for opto-electronic ~~device~~ devices such as, for example, light-emitting diodes and laser diodes. Herein, the orientation of the AlGaN film, that is, the III-V nitride film including at least Al element can be appropriately selected, depending on the crystal surface or the kind of material of the substrate.

Please replace paragraph **[0053]** with the following amended paragraph:

[0053] For example, the upstream zone 48 is heated up to 900°C, and the downstream zone 49 is heated up to 1000°C. Accordingly, the ~~The~~ upstream zone temperature can be controlled finely. For example, the first and the second boats 36 and 38 are positioned in separation in a gas flow direction, and are heated at different temperatures.